

W5YI

America's Oldest Ham Radio Newsletter

REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable.

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Prostate Treatment Device Stirs FCC Controversy

Amateurs, Federal Agencies Concerned About Interference, Marketing

The American Radio Relay League (ARRL) is objecting to the FCC's handling of the Prostatron, a medical device that operates at 1296 MHz. The 1240-1300 MHz band is used by air traffic control radar, and by the Amateur Radio Service on a secondary basis.

The Prostatron's manufacturer, EDAP Technomed, has asked the FCC to waive its rules to permit the device to operate at that frequency. It found other frequencies medically undesirable. In response to ARRL objections, and requests by aviation authorities that Prostatron meet tough requirements, the FCC has opened a new public comment period on the matter.

Though it does not have the requested FCC waiver, the device is approved by the Food and Drug Administration.

The Prostatron provides Trans-Urethral Microwave Thermotherapy (TUMT), which uses RF energy to heat the interior of the prostate, killing some cells. TUMT is a treatment for benign prostatic hyperplasia (BPH), an enlargement of the prostate gland that causes urinary problems.

ARRL is concerned that there is "...substantial interference potential" from the device to amateur licensees, and believes that other spectrum normally available for medical devices should be used instead of a ham band. (A competing TUMT-type device, the Urologix T3, uses the 915 MHz Industrial, Scientific and Medical (ISM) band instead.)

ARRL also vehemently argues that EDAP is marketing the device anyway, without the waiver it has requested.

Commission authorization, which may include a waiver, is typically required to market RF products subject to FCC rules. Without this FCC permission, the products may be ordered off the market and may not be used. In egregious cases, unauthorized RF products may be seized by U.S. Marshals.

Amateurs conducting weak signal work, especially moonbounce and radio astronomy, have let the FCC know very clearly that they are not eager to have the device operate in the 1240-1300 MHz ham band.

The Prostatron transmitter power is 60 W, which ARRL has stated would produce RF field strength 67 dB greater than FCC Part 18 rules permit for medical equipment in that band.

Device may contain amateur amp; Which frequency is best?

EDAP's critics, including ARRL and Urologix, believe it is not the prostate that requires 1296 MHz but commercial convenience. This is because the Prostatron is said to contain amateur RF equipment.

"The waiver would do no more than to permit EDAP to continue to market the device that it has been marketing illegally heretofore, and to utilize in the production thereof, low-cost amateur radio amplifiers for the purpose of production of the device."

ARRL told the FCC. "The company has continued to illegally market and sell the Prostatron devices, and to derive significant revenues therefrom, without the slightest Commission authority to do so."

"The League urges the Commission to enjoin EDAP from continuing these unlawful activities pending compliance with [FCC rules] and to cause EDAP to list all known installations of the Prostatron so that the operation of the device can be ordered terminated. To do otherwise would be to treat certain manufacturers of RF products differently than others."

According to an article in the *British Journal of Urology*, "Electromagnetic radiation around 1000 MHz has wavelength and propagation properties which are suitable for warming an organ the size of the prostate. A misconception which appears occasionally in the literature is that radiation at 1296 MHz has special properties which make it superior to other commonly used frequencies, i.e. 915 MHz. This is not true: it makes no difference whether a heating device operates at 900 or 1300 MHz."

The authors added that design of the microwave antenna is what matters, not the frequency of operation; and that "...1296 MHz is an amateur radio frequency, which ensures a good supply of standard components"

Prostatron not in use--or is it?

So far the Commission has been silent on the ARRL allegations that the device is being marketed and used without FCC approval. According to EDAP attorney Robert Ungar, a former FCC official, it's "...perfectly legal" to put Prostatrons in hospitals for testing purposes, and to "line up potential buyers." He called the League's position a "misunderstanding."

"EDAP would like nothing more than to be able to sell the devices," he said. "They were placed in hospitals for test purposes. It's my understanding that if one has a prostate problem, one can't yet have treatment from the device."

But according to an EDAP news release, patients "...are being treated" with Prostatron and the procedure "is available" at several hospitals and clinics.

That is the case at Georgetown University Medical Center in Washington D.C. We asked a Georgetown spokesperson if their Prostatron is being used to treat patients. She replied, "Sure."

Extent of amateur use debated

EDAP told the FCC that "it is our understanding that the [1296 MHz] band is not heavily used." Prostatron use, the company said, is expected to occur only during daytime hospital hours. "Amateur activity, much of which takes place at night, should not be affected."

Moreover, it must be emphasized that the Prostatron will be located in hospitals, and so, in most cases, will not interfere with amateur operations in residential areas."

ARRL called the above statement a "...cavalier analysis," and said that portions of 1240-1300 MHz are heavily used by radio amateurs, especially 1295-1297 MHz; that much weak-signal amateur operation is in the daytime; that hospitals are often "geographically proximate" to residential areas; and that "it is not clear" that use of the device will be confined to hospitals.

"A lot of the Prostatrons will be in mobile vans, to be shared between hospitals," Mr. Ungar said. "No emissions above the limit would be permitted to escape from the van. A lot of hospitals want to share the devices, particularly in big cities, where there probably isn't a lot of moonbounce activity."

Jupiter station aims at novel EME

Among the outspoken amateurs in the Prostatron case is John Bernard, KF4UGB, director of the Jupiter Space Station, a radio astronomy facility in Pendleton, S.C. <<http://members.carol.net/~saser>>

The station is developing SASER (Solar Amplification by Stimulated Emission Radiation), which seeks to mix and/or amplify weak microwave signals with the solar radio continuum and "re-radiate the combined signal in the megawatt domain."

Because of potential interference to this research, KF4UGB recommended that the Prostatron be re-designed and the FCC waiver request withdrawn; the device be shielded with 100% RF containment, or that the company assist in technical measurements and provide equipment to help the station identify and null out the effects of Prostatron RFI.

Robert Ungar, representing EDAP, replied to Bernard that "put in its best light, your proposal suggests that even if there is any interference to your project from a Prostatron, you can deal with it--if EDAP buys and transfers to you two extremely expensive pieces of electronic equipment whose sole purpose, presumably, would be to look for interference from a Prostatron." The company "does not believe that it has any responsibility to donate equipment to you merely because you have threatened not to withdraw your opposition to its waiver request," he said.

EDAP agrees to government conditions

The *National Telecommunications and Information Administration* (NTIA), representing federal military and non-military aviation interests, wants to control any possible interference to air traffic control radars in the band.

NTIA has decided to consent to the Prostatron if several conditions are met. For example, the FCC, NTIA and the Federal Aviation Administration must be informed of all Prostatron sites and must approve each one individually before operation can take place. All sites must be listed in the Government Master File of frequency assignments.

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EDAP must pay for any shielding of devices necessary to prevent interference with authorized radio services, and the user must change or stop using the device if notified by the FCC. Federal radars may become more sensitive in the future, NTIA noted; therefore, EDAP must agree to add shielding if it becomes necessary. EDAP has agreed with these conditions.

NTIA said that it "continues to have reservations about the long-term consequences of permitting access to the spectrum for a relatively high-powered, non-compliant medical application in a frequency band not designated for use by ISM devices, particularly one used for safety-of-flight aeronautical radionavigation services in the U.S."

But NTIA concluded that a "conditional waiver" of the FCC's Part 18 radiated emission limits "serves the public interest" by permitting the public to obtain microwave prostate therapy.

The FCC is accepting comments from the public on the NTIA and EDAP filings. Comments are due Jan. 9, 1998, with replies due Jan. 26. FCC "ex parte" rules Section 1.1200(a) and 1.1206(b) apply; "all parties making ex parte presentations either written or orally must comply with the 'permit-but-disclose' requirements," the FCC said.

EDAP maintains a World Wide Web site at URL: <http://www.edaptechnomed.com>. You can also use the search services to find other prostate health resources on the Web, including personal experiences with TUMT treatment.

ARRL OPPOSES INDUSTRIAL USE OF 24 MHz BAND

The ARRL also is clashing with Sierra Digital Communications Inc., a Rocklin, CA company that manufactures millimeter wave point-to-point links. Sierra's radios, used with traffic light controllers, operate in the 31.0-31.3 GHz band.

But the FCC has reallocated that little-known band to the *Local Multipoint Distribution Service*--a wireless cable TV and Internet service -- and is preparing to auction the licenses. In keeping with the auction mania sweeping much of the radio spectrum, it will no longer be possible to merely apply for a 31 GHz license and receive it. Competitive bidding will be required.

So Sierra is looking at alternative bands for its products. It found an alternative at 24 GHz. The company petitioned the FCC to waive, and also to change, the Part 15 rules to permit unlicensed operation of point-to-point links in 24.0-24.25 GHz at a field strength of 2500 mV/m (at 3 meters) provided that antenna gain is at least 33 dB (a beamwidth of 3.5 degrees).

"The output power needed to produce 2500 mV/m from a 33 dB antenna is less than 1 milliwatt," the company said, "which is insignificant relative to the powers authorized for other users of the band." These users include radars, Amateur Radio (allowed up to 1.5 kW), and Part 15 devices such as field disturbance sensors that

open doors or sound alarms.

The ARRL urged the company to test its 24 GHz products in the Experimental Radio Service (FCC Rules Part 5). But "That is apparently not the chosen means of proceeding, because Sierra has no need to test its devices; it merely wants to market them," the League told the FCC. "This it should by no means be allowed to do, because once Sierra has opened Pandora's Box, the damage to licensed services will have been initiated, and interference resolution will be impossible."

Given the nature of the satellite uplink and downlink communications now authorized in 24.0-24.05 GHz, "and regular amateur operation in the remainder of the segment, interference from ubiquitous, point-to-point transmitters as envisioned in the Petition would be impossible to accommodate," ARRL said. "There is clearly a significant potential for interference to Amateur and Amateur Satellite receivers" from the type of transmitter Sierra has proposed, it said, that "cannot justify" this type of Part 15 device in the band.

The League also argued that "Part 15 operation is itself questionable under the terms of the present Communications Act; provisions for high-powered, unlicensed point-to-point microwave facilities as proposed by Sierra would be plainly impermissible."

In reply comments, Sierra responded that:

- ARRL describes Sierra's proposed transmitters as "high powered," even though ARRL acknowledges the output power is under 1 mW.
- ARRL says that Sierra's power is "far and away" more than permitted to any other Part 15 device, but much more output power is permitted to other Part 15 devices already.
- ARRL says that the proposal is "plainly impermissible" under Part 15, but point-to-point use is commonplace in the 900, 2400, and 5800 MHz Part 15 bands.
- ARRL is concerned about interference to 24 GHz amateur satellite operations. But the combination of occurrences necessary for such interference to occur (such as position of satellite, location and direction of amateur and Sierra antennas) is "astronomically unlikely."
- "The amateur community presently operates alongside 24 GHz Part 15 transmitters authorized at 250 mV/m over a full circle. ARRL does not allege any cases of actual interference from these transmitters," Sierra said. "The amateur community also tolerates wide-beam field disturbance sensors at 2500 mV/m over much of the 24 GHz band, again without allegations of interference. Sierra has shown that its proposal offers no more risk of interference to amateur radio at 24 GHz than do present 250 mV/m operations. And for satellite operations using directional antennas (which Sierra believes will be necessary in any event), the narrowbeam antennas that Sierra proposes will reduce the interference risks to far below present values."

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AMATEUR RADIO STATION CALL SIGNS:

...sequentially issued as of the first of January 1998:

Radio District	Group A Extra	Group B Advanced	Group C Tech/Gen.	Group D Novice
0 (*)	AB0GT	KI0LE	(***)	KC0CMZ
1 (*)	AA1TA	KE1IZ	(***)	KB1CHA
2 (*)	AB2EP	KG2NJ	(***)	KC2CWL
3 (*)	AA3QP	KF3AT	(***)	KB3BZY
4 (*)	AF4HM	KU4NR	(***)	KF4VHQ
5 (*)	AC5OQ	KM5OB	(***)	KD5CZX
6 (*)	AD6EF	KQ6TW	(***)	KF6PBS
7 (*)	AB7XB	KK7LK	(***)	KC7ZYE
8 (*)	AB8BT	KI8EV	(***)	KC8JBM
9 (*)	AA9VI	KG9MH	(***)	KB9RXE
N. Mariana	NH0B	AH0AY	KH0GV	WH0AB
Guam	(**)	AH2DF	KH2SS	WH2ANV
Hawaii	KH7W	AH6PF	KH7HL	WH6DEL
Am.Samoa	AH8P	AH8AH	KH8DL	WH8ABF
Alaska	AL0H	AL7QW	KL0LM	WL7CUO
Virgin Isl.	(**)	KP2CM	NP2JW	WP2AIJ
Puerto Rico	NP3Q	KP3BE	NP3TN	WP4NNM

* = All 1-by-2 & 2-by-1 call signs have been assigned.

** = All 2-by-1 call signs have been assigned.

*** = Group "C" (N-by-3) call signs have now run out in all call districts. (Group "D" 2-by-3 call signs now being issued)

Note: New prefix numerals now being assigned in Puerto Rico (KP3/NP3), Hawaii (KH7/AH6) and Alaska (AL0/KL0)

[Source: FCC Amateur Service Database, Washington, DC]

NEW AND UPGRADING AMATEUR STATISTICS

For the Month of December 1995, 1996 & 1997

License Class	New Amateurs			Upgrading Amateurs		
	1995	1996	1997	1995	1996	1997
Novice	54	72	70	0	0	0
Technician	1298	1816	1057	0	1	0
Tech Plus	124	180	133	231	350	293
General	12	39	23	196	364	282
Advanced	2	6	8	148	270	228
Extra Class	5	9	3	133	221	172
Club/Empty	48	56	15	0	0	0
Total:	1543	2178	1309	708	1206	975
Decrease:	+41.2% (39.9%)			+70.3% (19.2%)		

MOST POPULATED STATES VS HAM OPERATORS

The following states are listed in order of population. We also indicate the number of people over 65 and the number of ham operators. Conclusions are at the end.

How to read: California has a population of 31.6 million or 12.0% of the total US population. It ranks No. 1 with 3.35million people over the age of 65 or 10.6% of its citizens. California also ranks No. 1 with 110,100 licensed amateur radio operators or .35% of its population - about 1 for every 287 persons.

Population Rank/State:	Pop. Million	% of Total	65 + Million	% of pop.	65 + Rank	Hams Thous.	% of pop.	Ham Rank
1. California	31.6	12.0%	3.35	10.6%	1	110.1	.35%	1
2. Texas	18.7	7.1%	1.87	10.0%	5	43.2	.23%	3
3. New York	18.1	6.9%	2.39	13.2%	3	36.2	.20%	4
4. Florida	14.2	5.4%	2.57	18.1%	2	43.7	.31%	2

Population Rank/State:	Pop. Million	% of Total	65 + Million	% of pop.	65 + Rank	Hams Thous.	% of pop.	Ham Rank
5. Penna.	12.1	4.6%	1.92	15.9%	4	25.8	.21%	6
6. Illinois	11.8	4.5%	1.48	12.5%	7	24.5	.21%	8
7. Ohio	11.1	4.2%	1.49	13.4%	6	32.3	.29%	5
8. Michigan	9.5	3.6%	1.18	12.4%	8	21.8	.22%	9
9. N. Jersey	7.9	3.0%	1.08	13.7%	9	17.5	.22%	11
10. Georgia	7.2	2.7%	.71	9.9%	15	15.0	.21%	16
11. N. Carolina	7.2	2.7%	.88	12.2%	10	18.5	.26%	10
12. Virginia	6.6	2.5%	.73	11.1%	14	17.3	.26%	12
13. Mass.	6.1	2.3%	.85	13.9%	11	15.9	.26%	13
14. Indiana	5.8	2.2%	.73	12.7%	13	15.7	.27%	14
15. Wash.	5.4	2.1%	.62	11.4%	18	25.1	.46%	7
16. Missouri	5.3	2.0%	.75	14.1%	12	13.2	.25%	19
17. Tenn.	5.2	2.0%	.66	12.7%	17	14.4	.28%	17
18. Wisconsin	5.1	1.9%	.68	13.6%	16	10.9	.21%	23
19. Maryland	5.0	1.9%	.56	11.2%	19	12.0	.24%	21
20. Minnesota	4.6	1.8%	.57	12.5%	20	11.0	.24%	22
21. Louisiana	4.3	1.6%	.49	11.5%	23	7.4	.17%	30
22. Alabama	4.3	1.6%	.55	12.8%	21	10.1	.23%	24
23. Arizona	4.2	1.6%	.55	13.0%	22	15.6	.37%	15
24. Kentucky	3.9	1.5%	.49	12.6%	24	9.1	.23%	27
25. Colorado	3.8	1.4%	.37	9.7%	30	12.0	.32%	20
26. S. Carolina	3.7	1.4%	.44	11.9%	27	6.8	.18%	35
27. Oklahoma	3.3	1.3%	.44	13.3%	26	9.5	.29%	25
28. Conn.	3.3	1.3%	.47	14.2%	25	9.2	.28%	26
29. Oregon	3.1	1.2%	.42	13.5%	29	13.3	.43%	18
30. Iowa	2.8	1.1%	.43	15.3%	28	7.0	.25%	31
31. Mississippi	2.7	1.0%	.33	12.2%	33	4.9	.18%	37
32. Kansas	2.6	1.0%	.35	13.5%	32	7.7	.30%	29
33. Arkansas	2.5	1.0%	.36	14.4%	31	6.9	.28%	32
34. Utah	2.0	.8%	.17	8.5%	37	8.0	.40%	28
35. W. Virginia	1.8	.7%	.28	15.6%	34	6.5	.36%	33
36. N. Mexico	1.7	.6%	.18	10.6%	38	5.3	.31%	34
37. Nebraska	1.6	.6%	.23	14.4%	35	4.1	.26%	40
38. Nevada	1.5	.6%	.16	10.7%	39	4.1	.27%	39
39. Maine	1.2	.5%	.17	14.2%	36	4.6	.38%	38
40. Hawaii	1.2	.5%	.14	11.7%	41	3.4	.28%	42
41. Idaho	1.2	.5%	.13	10.8%	43	4.1	.34%	41
42. N. Hamp.	1.1	.4%	.14	12.7%	42	5.1	.46%	36
43. Rhode Isl.	1.0	.4%	.16	16.0%	40	2.6	.29%	45
44. Montana	.9	.3%	.11	12.2%	44	3.1	.34%	44
45. S. Dakota	.7	.3%	.11	15.7%	45	1.6	.23%	48
46. Delaware	.7	.3%	.9	12.9%	47	1.5	.21%	50
47. N. Dakota	.6	.2%	.9	15.0%	46	1.7	.28%	47
48. Alaska	.6	.2%	.3	5.0%	50	3.3	.55%	43
49. Vermont	.6	.2%	.7	11.7%	48	2.3	.38%	46
50. Wyoming	.5	.1%	.5	10.0%	49	1.6	.32%	49

Total U.S.: 262.7 100% 33.1 12.6% 719.3 .27%

(Note: Does not include District of Columbia, or Island possessions)

We compiled the above figures to determine the relationship between the number of amateurs in a state and the total population of that state. As a general rule, they followed pretty close. The average state has one amateur among every 365 citizens.

A few states had a higher concentration of radio-amateurs - such as California, Washington, Arizona, Oregon, Utah, West Virginia, New Hampshire, and Alaska. (Alaska has one amateur for every 180 people - and the lowest percentage of their population over age 65 - only 5%.) The states of South Carolina, Louisiana and Mississippi had substantially less -- about 1 for every 550.

States with a higher percentage of their population over the age of 65 - such as Florida with 18% - seem to have more amateurs per capita.

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CUTTING EDGE TECHNOLOGY

■ **Problem on the horizon?** The Nov. 29, 1997 *Science News* reports that researchers have determined that low level electromagnetic fields found in residential homes can diminish (or wipe out) the action of Tamoxifen -- a widely synthetic hormone used to prevent the recurrence of breast cancer.

Another *Science News* article contends that **most household appliances including audio, video products and PCS stay on even while switched off.** This "accounts for 5 percent of the total electricity use" [and] "adds up to more than \$3 billion worth of electricity annually."

Most electricity leaks trace to power transformers that cannot be turned off -- or the need to power a clock, a digital display, a memory chip or to place a product in a standby mode. Some devices (such as satellite receivers and cable boxes) consume the same amount of power whether they are on or off. "The only difference seems to be the red 'on' light." (Check out <http://www.sciencenews.org>)

EMERGING COMMUNICATIONS

■ **It looks like Cable-TV operators are making a run at Internet access for the masses.** To jump start Internet cable access, the cable industry has placed a whopping \$4.5 billion order for 15 million two-way advanced digital cable converters with General Instruments. This represents about 20% of existing cable households. TCI, the nation's largest cable company, alone has committed to at least 6.5 million set-top boxes.

A research study said that the more than 100,000 people that now access the Internet via cable will grow to 1 million subscribers by the end of next year.

Eventually the cable industry hopes that consumer electronics manufacturers (such as Sony, Thomson - they were the first makers of direct broadcast satellite receivers, Toshiba, Mitsubishi or Matsushita - Panasonic) will enter the set-top business. The goal is to have Internet/cable boxes available to the public on the same basis that VCRs are now.

Low priced residential telephone service over TV cable lines is also on the drawing board for 1998.

COMPUTER INFO

■ **Packard-Bell is now a foreign owned Company.** Japan's NEC has invested an additional \$240 million in the struggling personal company bringing its ownership up to 49%. Another 13% is owned by France's Groupe Bull SA. The firm is trying to convert to a direct supplier of PCS to business. It had previously focused on the retail consumer market. Packard Bell was not profitable in 1996.

■ **The market is changing as more and more fully featured PCs are being sold at \$1,000 or less.** Technology consulting firms are predicting only slightly less sales growth in 1998, however ...around 14%. A question is how bad Intel will be hurt. The days of consumers and businesses willing to pay Intel \$500 for a chip are ending. And Intel's chief competition (Cyrix and AMD) are starting to become more of a factor in the low end chip business.

INTERNET NEWS

■ **There is reason to believe that the federal government will eventually regulate the Internet similar to other telecommunications.** A lot of talk is going on about regulating electronic commerce ...and the need for copyright and fraud protection.

State politicians and Congress are also very concerned about the Internet's impact on the taxes they collect ...or want to collect. And telecom companies and other big businesses (such as the postal service) are worried about how the Internet is affecting their business. Right now, the Internet is the biggest bargain ever! It probably will not last forever.

■ **Have you tried the new "Search Spaniel?"** This is the ultimate search engine. It lets you use as many search engines as you like simultaneously and conveniently groups related search engines together. In addition, you can personalize *Search Spaniel* by choosing your favorite engines (from a list of 180) to create a personal list. Search results from multiple engines can be displayed on a single framed window - or each engine can have its own window. We use it ...and we like it! Find it at: <http://www.searchspaniel.com>

■ High technology is taking hold! A

survey in the *Wall Street Journal* shows 77% of US small businesses use cellular phones, 81% access the Internet and 54% use computer networks. Three fourths of all companies say technology changes so fast, that they have trouble keeping up. The Internet is used (87%) for information, (74%) external communications, (54%) data exchange, (49%) for product marketing and (48%) corporate communications.

■ **Network Solutions (Herndon, VA) which is about to lose its monopoly of Internet domain registration** is starting "WorldNIC" -- or World Network Information Center. (<http://www.worldnic.com>)

WorldNIC will work with small non-technical businesses to secure their domain name and an online identity even if they do not have a website or even use e-mail.

Since 1993, Network Solutions has been the exclusive registration service for Internet domain names that use .com, .edu, .net and .org suffixes. Their contract with the National Science Foundation expires in March.

■ **Free e-mailed greeting cards had its biggest season ever!** Yahoo launched a partnership with Hallmark (located at <http://www.mail.yahoo.com>). Hallmark also offered another 1000 free e-greetings on its own website at: <http://www.hallmarkconnections.com>.

American Greetings, Inc. (which charges for most of its cards - such as 20 for \$14.95) has just inked a three-year multi-million dollar deal with America Online called "AOL Card-O-Matic."

WASHINGTON WHISPERS

■ **Microsoft stock is sinking (down 20% in a month)** as the US Department of Justice's (and state attorneys general) probe of Microsoft's marketing practices deepens. It had traded as high as \$150 a share, now down in the \$120 range at this writing.

Both are gearing up to play hardball. The Dept. of Justice has appointed a Harvard Law Professor to oversee their case. CEO Bill Gates own stake in Microsoft has dropped to \$32 billion from nearly \$40 billion. There is a lot of confusion as to just what is going on. Here is the story.

Microsoft got to be the powerhouse that it is by making a lot of right decisions. It really begun in 1980 when a young Bill Gates bought the rights (for \$100,000) to a software package called the "Quick and

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Dirty Operating System" (QDOS).

Shortly thereafter, IBM contracted with Microsoft to build the operating system for a new line of PCs it planned to launch the following year. Gates modified QDOS to meet IBM's requirements and renamed it MS-DOS. In a stroke of genius, he licensed the system to IBM but retained the rights to sell it elsewhere.

IBM proved too big and bulky to achieve success with computers aimed at the masses. Instead, smaller, more nimble companies (such as Packard-Bell, Compaq, Dell ...and many others) were able to throw together hardware components to profitably offer IBM-PC compatible "clones" that ran MS-DOS at less money to the public.

MS-DOS (and Intel chip) equipped computers quickly became the operating system and microprocessor norm and provided the base for third-party software writers to supply applications. Since PCs were becoming compatible, a program written for one brand of PC would also run on another. The rest is history.

In 1992 MS-DOS accounted for 60% of shipments of operating systems for all types of PCs and more than 80% of the operating systems that used some version of DOS. By mid-1993, about 120 million copies of MS-DOS and another 50 million copies of Microsoft's Windows (a graphical overlay program that simplifies the manipulation of MS-DOS) had been sold.

On the basis of MS-DOS, Windows and complementary applications software, Microsoft has now grown to a company with annual sales of \$9 billion and \$2 billion profit! (They also paid \$3.5 billion in taxes last year - a huge cash-cow for the feds!)

One of the chief reasons for Microsoft's success, is their pricing policy. They have a superior product which is priced so low that competitors have difficulty matching it. They can price it low because they concentrate on the masses of which they have a huge installed base of customers.

In the early 1990's, Microsoft had some marketing policies which were questionable. For example, if a PC maker wanted to use other operating systems on some of their machines, they had to pay Microsoft a per-unit fee for every PC shipped, regardless of whether MS-DOS was actually installed on all of them. This was a strong incentive for manufacturers to use only MS-DOS ...and the operating systems of Apple, Tandy, Commodore and

Atari fell by the wayside. They are still bitter over what happened.

In June 1990, the U.S. Federal Trade Commission began looking into the marketing practices of Microsoft. In 1993, the Justice Department's Antitrust Division got involved. A joint agreement -- a consent decree -- brought the case to a close in 1995. A consent decree is an agreement that has the force of a legal judgment (it is approved by a judge) but in which the defendant does not have to admit guilt. It basically says, "I never did anything wrong -- and furthermore, I'll never do it again!"

In signing the decree, Microsoft agreed to (1) rewrite its contracts so that PC makers would pay only for each copy of MS-DOS that was installed on the PCs that they shipped and Microsoft's contracts would have terms that were no longer than one year; and (2) its testing agreements with applications software developers would not preclude their working with other producers of operating systems, so long as confidential information was not revealed.

Microsoft was not precluded from developing new applications software on its own or adding new features to its existing products - but it could not tie new products to its operating system. Therein lies the controversy!

Microsoft contends that its Internet Explorer browser was a part of its first Windows 95 operating system and that the DOJ knew even before negotiations began on the consent decree in 1994 that it planned to integrate web technology into its Windows operating system. Furthermore, PC makers could include Netscape's browser with its machines if they chose to.

On October 20, the Justice Department charged Microsoft with violating the 1995 decree the company signed to settle antitrust charges. The DOJ believes the Internet Explorer browser is a separate new product and wants Microsoft to license its Windows 95 operating system without the browser included.

Microsoft's position is that the browser is an integral part of the operating system. Attorney General Janet Reno has asked a U.S. District Court judge to fine Microsoft \$1 million a day for violating the consent decree.

To add fuel to the fire, the DOJ says it has been provided with internal Microsoft documents (actually corporate e-mail) showing that the company intended to treat its browser as a separate product and not part of its operating system.

Government lawyers say it is easy to strip the Internet Explorer browser from Windows 95 - which they have done. Microsoft says to do so, will damage the operating system and that "...poorly informed lawyers have no vocation for software design."

On December 11, a Federal District Court denied the Justice Dept's petition to hold Microsoft in contempt of court for allegedly violating the consent decree and their request for civil fines. The court said that further information is necessary before any final decision can be issued.

On December 15th, Microsoft said it would appeal the October 20th preliminary injunction and filed a *Motion for Expedited Consideration* of its appeal since its next operating system upgrade, Windows 98, will be released within six months. A federal appeals court granted Microsoft's request for quick consideration - much to the dismay of the Justice Department. January 13th has been scheduled as the date when arguments begin.

As the legal action between Microsoft and the government intensifies, investors are heading to the sidelines. Microsoft stock is still up nearly 50% from last year's close, however.

■ **Are you aware that you can file comments on all FCC proceedings by e-mail?** Instructions on how to do it are located on the FCC's website at: <http://www.fcc.gov/e-file/email.html>. Basically you just call up a blank form and fill in the blanks. You e-mail the form to the FCC at ecfs@fcc.gov after saving it as an ASCII file. The FCC's computer will acknowledge receipt.

AMATEUR RADIO

■ On pages 8 and 9, we digest the December 1997 **IARU Region II News**. It is interesting to note that there is a mention that **Amateur Radio is "...more or less stagnated" in the developed countries** (such as the USA, the UK and Japan.) "Explosive growth" seems to be taking place only in the less developed nations - the ones that have little access to the Internet.

In recognition of that fact, the IARU has formed an "Amateur Radio Outlook Committee" to review the impact of changing technology and the Internet on the growth and development of Amateur Radio. The ARRL and IARU always form a committee when there is a problem looming - which seems to do little

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toward resolving anything.

There also seems to be a question as to when the World Radio Conference that will consider Amateur Radio will be held. The *IARU Region 2 News* suggested the year would be 2002, while the *"The Canadian Amateur"* - journal of Radio-amateurs of Canada (RAC) - said it would be 2001. (Dec. issue, page 6)

And the *IARU Region 2 News* said that the ham related issues would not be taken up at WRC-99 due to "...budgetary reasons" - while Canada said the reason for the deferral was "...a long list of other items vying for inclusion at WRC-99." This all leads us to question whether the real explanation for the postponement was clandestine IARU support of a delay so that the Morse code issue would not have to be considered for another few years.

■ **The Dayton HamVention will be staying in Dayton, Ohio!** DARA signed a five year contract with HARA Arena to keep the HamVention in Dayton. It is the cities largest convention -- some 28,000 attended the 1997 edition. There had been talk about the convention moving to Columbus or out of state. The 1998 Dayton HamVention will be held May 15-17.

DARA is once again offering scholarships to hams graduating from high school in 1998. Applicants must send a SASE and request an application from: DARA Scholarship Committee, (ATTN: Stan Kuck NY8F, Chairman), 45 Cinnamon Ct., Springboro, Ohio 45066. The deadline for accepting applications is June 1, 1998.

■ **Great Britain said "farewell" to manual Morse operations on December 31.** The following message (originated by the British government) was transmitted by UK coast stations GLD, GCC, GKR and GPK:

"CQ de GLD GCC GKR GPK BT FROM 01/0000Z JANUARY 1998 THE UK COASTGUARD AGENCY NO LONGER REQUIRES BRITISH TELECOM MARITIME RADIO SERVICES TO MAINTAIN A 500 KHZ DISTRESS WATCH. AT THE SAME TIME, BRITISH TELECOM'S MF COAST RADIO STATIONS WILL CEASE ALL MORSE COMMERCIAL SERVICES. HF MORSE SERVICES WILL CONTINUE AS NORMAL WITH PORTISHEAD RADIO/GKA. MF COAST STATION STAFF SEND BEST WISHES TO ALL RADIO OPERATORS, PAST AND PRESENT, WHO USED BRITAIN'S MF MORSE SERVICES DURING THE PAST 89 YEARS. AR" (Message copied by GW4XXF.)

SOS SENT ON LAST DAY OF CW!

The following news story originated out of Great Britain on January 1, 1998.

Dramatic SOS signals the end of Morse code

By Paul Whittaker

An SOS message from a 13,000-ton vessel listing dangerously in the mid-Atlantic yesterday signaled the end of an era for Morse code, which was officially scrapped at midnight.

The ship which tapped out Morse code's final SOS was the Bahamas-registered *MV Oak*, en route from Canada to Liverpool with 26 crew. It was 790 miles west of Ireland when its cargo of wood shifted in storm-force winds and it lost all engine power.

The signals were picked up by Stonehaven radio, near Aberdeen, before being passed to the Falmouth Coast Guard at 10:05 a.m., who initially thought it was a joke for posterity. Gerry Wood, a spokesman, said: "We haven't had a Morse distress message for years. It was almost too perfect. But we knew straight away someone was in distress as nobody ever sends an SOS signal as an exercise."

Although the initial communication was via the old-fashioned system, all subsequent contact has been by modern satellite communications, which has taken over the role of saving sailors.

The move to scrap Morse originated in the 1980s when the International Maritime Organization decided to phase it out. SOS messages have been flying around the world since 1908 when British and German radio operators agreed on the message. It was not because Save Our Souls was an easy phrase to remember but because S and O are the two most easily recognized letters in Morse code.

The final Morse code distress message was not quite as dramatic as the first SOS sent at sea 85 years ago, by the *Titanic*. In the early hours of April 15, 1912, John Phillips, the wireless operator, sent the message: "SOS SOS. Come at once. We have struck berg. Position 41 [degrees] 46 N, 50 14 W. SOS." Its last message said: "Come as quickly as possible. Engine room filling to boilers."

Yesterday's message from the *Oak* read: "SOS. SOS. This is Oak. Position 53 16 N, 24 59 W. Stop engine. We need assistance."

An RAF Nimrod was circling last night as the master notified Coast Guards that he was preparing to abandon ship, although no other ships were in the area to

pick up the crew. He also found time to relay the message: "Happy New Year. Best regards. Master."

A Coast Guard spokesman said: "His good wishes are truly inspirational when you consider his ship is in severe danger in the middle of nowhere, with the nearest ship 500 miles away." The *Oak* is well outside the range of land-based RAF, Royal Navy and Coast Guard rescue helicopters.

■ **ARRL has petitioned the National Telecommunications and Information Administration to support an amateur allocation at 160-190 kHz, and NTIA has agreed to do so.** The UK's radio regulators, meanwhile, have decided to abandon 73 kHz for the band around 140 kHz proposed by CEPT (a European telecommunications federation) to be applied uniformly throughout Europe. This has not met with enthusiastic approval of the British hams who have put time and effort into the development of 73 kHz hardware. (Thanks, AMRAD)

■ **The 2nd IARU World Championship in High Speed Telegraphy (HST)** was held in Sofia, Bulgaria between October 6 and 10, 1997. It was hosted by the *Bulgarian Federation of Radio Amateurs (BFRA)*.

The first World HST Championship was held in Hungary in 1995. (Prior to 1995, the contest was called the European HST Championship.) The World Championship is held every two years.

There were six categories of participants: (Age to 20) A- Junior Females, B- Junior Males; (Age 20-40) C- Females, (Age 20-46) D- Males; (Age over 40) E- Senior Females and (Age over 46) F- Senior Males.

The tests consisted of reception of 5-letter groups for one minute starting at 20 and 30 wpm; transmitting 5-letter and 5-figure groups, and receiving/transmitting 5-character mixed text groups. There were no participants from North America.

A member of the Japanese National CW team, Yasufumi Nariki, JH9CAJ (he also holds the U.S. Extra Class vanity call sign of W5YN) sent us a computer disk of the winners and scores. But unfortunately we couldn't convert its "Unknown Format" to readable text.

Yasu wrote us that the chairman of the HST organizing committee (Laszlo Weisz, HA3NU) wants to have some high speed telegraphy competitors from the United States at the next HST. The 3rd IARU Championship is scheduled to be held in Italy in 1999.

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IARU REGION II NEWS - DECEMBER 1997

The International Amateur Radio Union (Region 2) has sent out its quarterly report to member societies. Here is a highly capsulized recap of some of the more interesting items.

WRC-97 CONFERENCE HELD IN GENEVA

The 1997 World Radiocommunication Conference ended in the early morning hours of November 21 in Geneva. The Conference had little effect on the Amateur Radio Service, and decisions on changes in the Amateur Radio Morse Code examination requirements and on realignment of the Amateur Radio 40 meter band will likely be put off until the year 2002.

The Little LEOs (non-voice, non-geostationary mobile satellite interests) -- which put a huge scare into the ham radio community in 1996 with their proposals to share Amateur Radio VHF and UHF bands -- were unable to muster much support for new allocations at WRC-97. However, they came away with up to 3 MHz of additional spectrum on a regional basis, in the bands between 454 and 460 MHz.

The Little LEOs also got a resolution calling for urgent studies in preparation for WRC-2000 -- what some at the conference called "a hunting license" for additional VHF/UHF spectrum. A second issue that will recur at WRC-2000 is finding a place in the 420-470 MHz frequency range for the Earth Exploration Satellite Service (EESS). Synthetic aperture radars (SARs) using frequencies in this range are said to be capable of penetrating the rain forest for mapping purposes.

Two significant ham radio-related issues failed to make the proposed agenda for WRC-2000. For budgetary reasons, the WRC-97 delegates had to limit the WRC-2000 agenda only to the most urgent issues. Pushed back to the tentative agenda for WRC-2002 were the possible realignment of the 40 meter band to resolve a conflict between the Amateur Radio and Broadcasting Services in part of the band (along with possible expansion of broadcasting bands between 4 and 10 MHz), and Article S25 of the International Radio Regulations. Article S25 contains the international regulations specific to the Amateur and Amateur-Satellite Services, including the Morse code requirement for operation below 30 MHz.

WRC-97 delegates approved a resolution encouraging administrations to facilitate the use of Amateur Radio and other "decentralized means of communications" for disaster mitigation and relief operations. This resolution eliminated the need for Resolution 640, which defined how certain Amateur Radio bands could be used for international disaster communications by non-amateur stations, so Resolution 640 was suppressed.

WRC-97 delegates did agree to upgrade the Earth Exploration Satellite Service from secondary to primary at 1215 to 1300 MHz, which should have only minimal impact on amateur use of 1240-1300 MHz. The presence of EESS there also reduces the possibility that other, less-compatible services might later be introduced into this band.

In other allocations decisions, amateur satellite segments were not included among allocations for wind profiler radars. Except for a worldwide primary allocation at 1270 to 1295 MHz, the only specific allocations for wind profiler radars are in Region 1, and those are on a secondary basis. Region 2 administrations were urged to implement wind profilers in radio-

location bands at 440 to 450 MHz, 904 to 928 MHz (protecting the lower, weak-signal segment), 1270 to 1295 MHz (protecting amateur satellite and weak-signal), and 1300 to 1375 MHz. The delegates agreed that the bands 420 to 435 MHz or 438 to 440 MHz could be considered for use in situations where there was incompatibility between wind profiler radars and other radio applications at 440 to 450 MHz or 470 to 494 MHz (only in some Region 1 countries). In this case, too, the amateur-satellite segment is protected.

Several Region 1 (primarily European) countries deleted footnoted exceptions to the international table of allocations in the 1810 to 1830 kHz range, expanding the usability of 160 meters for ham radio. North Korea was persuaded to drop its bid for footnoted exceptions to the allocations table that could have affected some Amateur Radio bands in that part of the world.

IARU hosted a reception for officials and delegates during the Conference, which was attended by ITU Secretary General Dr. Pekka Tarjanne and Chief of the Radio Regulation Bureau Robert Jones. In all, 1801 delegates from 142 countries registered at the conference. Another 141 observers from regional and international organizations also attended. The ITU's International Amateur Radio Club (IARC), 4U1ITU, whose President is Attila Matas, OM1AM, used the special callsign 4U1WRC for the Conference. Those who wish to learn more details about WRC-97 and its impact on the Amateur Radio Service can access the ITU Website on the Internet's World Wide Web at <http://info.itu.ch/> or IARC Website at <http://www.itu.int/radioclub/>

AMATEUR RADIO AT 1998 WINTER OLYMPICS

There will be a special events stations operating at the 1998 Winter Olympic Games in Nagano, Japan, with the callsign 8N0WOG. The station will be open from 7 to 22 February, 1998, from 0930 to 2100 hours local time. All visitors who have Amateur Radio licenses from their home countries will be able to operate this station. They must bring their Amateur Radio licenses with them in order to operate the station.

IARU REGION III HOLDS CONFERENCE IN BEIJING (by Fred Laun, K3ZO)

If one focuses only on the decisions made at an IARU regional conference, a very limited picture of the overall activities of the conference is presented. Such is the case when we look at what took place at the IARU Region III Conference which took place from 8-12 September 1997 in Beijing, China's bustling capital city.

Sixteen of Region III's 25 Member Societies sent representatives to the Conference. Another four Member Societies were represented by proxy. The Viet Nam Amateur Radio Club (VARC), which is not a Member Society, sent three of its officials to the Conference, which makes it likely that Viet Nam will eventually become a Member Society.

To start with, each Society gives a formal report of its activities and its concerns.some of the Member Societies in attendance were Societies representing countries whose Amateur Radio Service achieved its principal growth in years gone by, and whose Amateur Radio populations and Society membership have more-or-less stagnated. Included among these Societies would be the Japan Amateur Radio League (JARL), the American Radio Relay League (ARRL), the Radio Society of Great Britain (RSGB), the Wireless Institute of Australia (WIA), the New Zealand Amateur Radio Transmitters (NZART). (ARRL and RSGB are also Member Societies of IARU Regions II and I, respectively). Also in this category would be the Radio

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Society of Sri Lanka (RSSL), which did not attend the Conference. These organizations are concerned about attracting today's youth into Amateur Radio and the possibility of the attractions of the Internet drawing youth away from Amateur Radio. Other matters which received particular attention at this Conference:

Disaster Communications. The key role that Amateur Radio was able to play in providing communications during recent disasters in the Region III area, be they earthquakes in India and Japan, wildfires in Australia, typhoons in the Philippines, floods in Thailand or cyclones in Bangladesh, have convinced Member Societies that more efforts should be made to equip and train Radio Amateurs to perform more effectively in such situations. In this respect, Region III's Member Societies, in contrast to IARU Region I which has opted for the status quo, favor changes in ITU Article S25 governing the Amateur Radio Service in order to relax third party traffic restrictions so that training nets are encouraged.

Standards, Type Approval and Electromagnetic Compatibility. Conference delegates reacted with concern to reports from IARU officers that ITU Working Groups were quietly taking steps to adopt uniform spurious emissions standards for transmitters which would have made all transmitters currently in use by Radio Amateurs worldwide incompatible with ITU regulations.

Other ITU Working Groups considered requirements for type approval of all equipment used by the Amateur Radio Service, which would have made it impossible for Radio Amateurs to legally "homebrew" their own transmitting equipment as they have been doing since the beginning of Amateur Radio. Only because IARU, at considerable expense in time and money, has been carefully following the work of such Working Groups, was it able to intervene in time to keep such measures from being brought to World Radio Conferences (WRC's) in their original form, which might have seen their approval by consensus to the great detriment of the Amateur Radio Service.

Amateur Radio Direction Finding (ARDF). ARDF activities in Region III are growing rapidly, though are still not practiced on the same level that they are in some countries of Eastern Europe. Member Societies say that they find them a very effective way to attract youth to Amateur Radio, and most of the Societies in attendance indicated their intention to step up their activities in this area.

IARU Monitoring Service (IARUMS). The IARUMS in Region III has succeeded in getting a few long-time notorious intruders removed from the Amateur Radio bands, but a new and very serious source of interference to Radio Amateurs has arisen with the heavy use of the low end of the 40 meter band by logging companies in Indonesia transmitting on SSB.

...It is also felt that now that the 10 meter band is about to improve for worldwide communications with the current upturn in sunspot numbers, the fact that this band is widely used by commercial companies in many parts of Asia for line-of-sight communications will become painfully evident to Radio Amateurs in the next few years.

Liaison with ITU and its Regional Organizations. Just like their counterparts in Regions I and II, Region III Member Societies agreed that they have no choice but to increase their liaison and participation in ITU forums as well as those of its regional affiliate, the Asia-Pacific Telecommunity (APT). A special Working Group, which functioned as a Committee of the Whole, was established at this Conference to consider the matter of possible changes in Article S25 of the ITU Regulations. Dele-

gates provided the IARU Observers at WRC-97 with general guidance while leaving this IARU team with the necessary flexibility to respond to unforeseen events. With respect to the matter of continuing the requirement for knowledge of the International Morse Code for Amateurs wishing to utilize frequencies below 30 MHz, Member Societies did not have a unified position on this matter but permitted an ARRL amendment to go forward which would probably result in retention of this requirement should the matter be taken up at WRC-97 (which it was not). Member Societies were in agreement that Article S25 contains many other matters of importance in addition to the Morse Code examination matter, and that these matters had more or less been lost in the QRM over the CW issue. In a separate matter not involving Article S25, delegates agreed that IARU observers at WRC's should press for a 300 KHz exclusive Amateur Radio spectrum assignment in the vicinity of 7 MHz.

THE ADMINISTRATIVE COUNCIL OF THE IARU:

...met in Beijing, China, September 13-15, 1997. The meeting took place after the IARU Region III Conference. An Amateur Radio Outlook Committee was established, in the light of changing technology and the Internet, to make general recommendations as to the future growth and development of Amateur Radio. Tom Atkins, VE3CDM, was appointed chairman.

(VE3CDM writes: "During the AC meeting, a lively discussion resulted from a document prepared at the Council's request by the International Secretariat concerning the Internet and its impact of the Amateur Radio Service. The AC felt that apart from looking into the constitution and finances of the IARU, and the ITU Radio Regulations, the IARU should also be concerned about the possibilities for future growth and development of our service. The assignment to the "Outlook Committee" is as follows:

"To review the current and future state of the art in the Amateur and Amateur-Satellite Services in the light of the changing technology and the Internet; to focus on technology, techniques and future developments and to make general recommendations as to the future growth and development of Amateur Radio."

A deadline of June 30, 1998, was established. This, of course, is a matter for IARU Member Societies around the world. Some of these societies are already asking themselves: "Where are we going and what do we expect for the Amateur Services in the future?"

Any and all input from amateurs everywhere, will be much appreciated, and should be forwarded to: Amateur Radio Outlook Committee, c/o IARU, P.O. Box 310905, Newington, CT 06131-0905.)

A resolution was adopted encouraging the promotion and development of Amateur Radio digital technology. The Council recognized the need to review the structure of the IARU to ensure its long-term viability, and as a first step, decided that an *ad hoc* committee be designated by the president to provide a preliminary report for the next meeting of the Council.

The theme for **World Amateur Radio Day, 20 September 1998**, was selected as "Amateur Radio -- Communicating Worldwide for Three Quarters of a Century." The theme was chosen in recognition of the 75th anniversary of the first trans-oceanic two-way amateur communication, between France and the United States, in November 1923. The theme of World Amateur Radio Day for 1997 is "35 Years of Amateur Radio in Space." Beginning in the year 2000, World Amateur Radio Day will occur in April, on the anniversary of the founding of the IARU in Paris in 1925.

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CYBERSPACE GAMBLING:

Is it the online killer application?

It has now been two years since the first online gambling site made its appearance. Betting on the Internet continues to be a hot subject among state and federal regulators. I suspect they are more concerned about the potential loss of taxes than they are about abuses to the public.

The *National Association of Attorneys General* (NAAG) wants the feds to seize control of Internet wagering. So far the Justice Department has been reluctant to take any action against anyone.

By far, the biggest problem is that of jurisdiction. The Pentagon agency that helped develop the Internet during the cold war wanted the net to be militarily secure. It is all that ...and more. The Internet has proved to be not only "destruction-proof" but "regulator-proof" as well. No one knows which local, state, federal or international rules pertain to the new world of online gambling.

Wagering by the public is an incredibly big business ...more than \$550 billion a year! And more than 90% of the public participate in some form of gambling. Forty-eight states have some form of legalized gambling (all except Hawaii and Utah) and 20 permit casinos. Online betting is expected to draw revenues of over \$50 billion in 1998.

The states have been the most vocal about potential harm! They want to protect their lotteries that keep half the revenue under the guise of voluntary taxation. By contrast, legal wagering companies operate with profit margins of just a few percentage points.

It used to be that we only heard about supposedly marginal offshore companies operating from such places as Antigua, Aruba, Dominican Republic, Belize and other Caribbean islands. They are now being joined by big time operators located all over the world - including Italy, Monaco, Spain, and Canada. And there is even an on-line casino operating from Korea. Many have switched from the "beta test" to the "taking real bets" stage.

Not to be outdone, U.S. casino operators and Indian tribes are also gearing up. Betting in and from Indian lands is not regulated at all. It is absolutely driving some law enforcement and regulatory agencies crazy!

Virtual Vegas (based in California) is spending more than \$10 million on their site. Another California company purchased the small *St. James Club* casino in Antigua and opened the *World Wide Web Casino*. San Diego's *Internet Gaming Technologies, Inc.* has a gambling license in Ecuador acquired through a company registered in Monaco. California is threatening telephone companies with prosecution if they do not intercept and cut off gambling site traffic.

The state of Minnesota is already involved in a suit against Las Vegas-based *WagerNet*. A Minnesota judge ruled in August that the state can regulate betting on the Internet and that advertising a gambling site to Minnesota residents constitutes a violation. A New York firm,

You Bet International, Inc., operates off-track horse race betting to PCs through the New York Racing Association and the state's parimutuel betting laws.

The *Internet Gambling Prohibition Act of 1997* (S.474) introduced last May by Sen. Jon Kyl (R-Ariz.) died in the Senate Judiciary Committee. He says he will reintroduce it. That bill holds Internet Service Providers (ISPs) criminally liable if they provide access and transport service to known or suspected gambling sites. His bill calls for fines up to \$20,000 and up to four years in prison.

The NAAG proposed amendments found in the Kyl Bill eliminates the requirement that the transmission be by wire and includes the use of radio, electro-magnetic, photo-optical, photo-electric or other similar devices. It also deletes the limitations that the statute applies only to those who are "engaged in the business of betting or wagering" and extends the prohibitions to persons who knowingly receive wagers or wagering information. Removed is the limitation that the only prohibited bets or wagers are those made on "sporting events or contests" and requires an ISP to discontinue access to any Internet site if requested by any local, state or federal law enforcement agency.

ISPs also would be licensed and subject to government content restrictions as if they were a broadcast medium. The US Constitution is the primary obstacle to holding ISPs responsible for site content since it abridges the freedom of speech and press. The Kyl bill also extends the reach of the act to persons outside the United States territory if they transmit to or receive wagers or wagering information from the US.

Congress did, however, establish a *National Gaming Commission* to look into on-line wagering. The first *International Symposium on Internet Gambling Law and Management* was held in Washington, DC in mid-November. It was attended by top regulators, lawyers and experts from gaming companies. They are looking at six groups to control or prohibit Internet gambling. These are the operators of the Internet gambling sites, ISPs, search engine operators, sites that accept gambling advertising, fund transfer providers ...and "you" - the home user.

There continues to be widespread concern about the security of on-line transactions, fair odds, the potential for abuse from firms that distance themselves from U.S. regulations and enforcement, betting by minors and compulsive gamblers ...and the fact that anyone can build and operate a relatively low-priced on-line casino without a background check.

My own view is that I would not ban on-line gambling. A person should have the freedom to spend money as they wish. But I am not about to go out and open a wagering account with an offshore casino either.

You probably need to check out what is available for yourself. An excellent advertiser-supported directory of gambling sites is located at <http://www.gambling.com>. This website, located in the United Kingdom, contains ratings supplied by visitors.